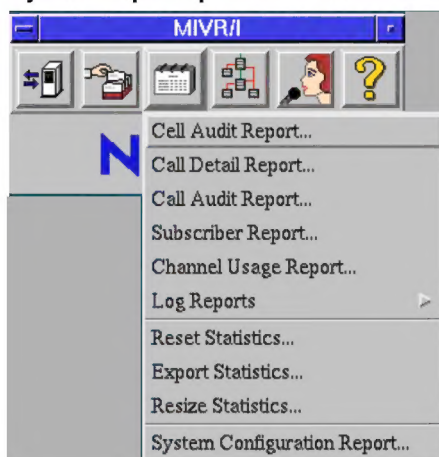

Chapter 5: Running reports

The System Reports feature enables you to generate a variety of statistical reports to manage Meridian IVR activity more effectively.

You can access the reports through the System Reports window. If you need to edit or print the report, you can use the nedit tool. The commands for this tool are available from the pull-down menus (File, Edit, Search, etc.). All of the dialogs have Cancel buttons. The Undo command in the Edit menu can immediately reverse any modifications you make. The nedit tool does not change the file you are editing until you save it.

Figure 5-1
System Reports pull-down menu



You can use the nedit tool independently as a regular editor such as vi. However, you must be in the UNIX shell to run nedit.

Procedure 5-1 Running nedit

- 1 Click on the left mouse button, then select MIVR xterm.
A window frame appears.
- 2 Move the mouse to place the report in a suitable location on the desktop, then click on the left mouse button.
You are now in the UNIX shell.
- 3 At the # prompt, type **nedit filename** and press <Enter>.
A window frame appears.
- 4 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.
The system displays the report for you to edit.

Running the Cell Audit Report

The Cell Audit Report shows the number of times that each cell within each application was accessed. This helps you to analyze your applications and see how frequently the various activities within an application are used by your callers.

This report lists cell usage in groups of six-hour periods. One record is generated for each application per hour. Also, one record is generated for each cell in each application per hour. The Cell Audit Report can contain up to 146 250 of the most recent records.

This report lists statistics for all cells within the application, including Cell #0. Cell #0 is another name for the Default Cell. For more information on the Default Cell, refer to the *Meridian IVR Application Development Guide* (NTP 555-9001-310). Meridian IVR treats the information on the Default Cell window as if it were a cell. Each time an application runs, Cell #0 is used twice, once at the beginning of the call and once at the end of the call, for cleanup purposes. For this reason, Cell #0 is counted twice in the Cell Audit Report each time the application processes a telephone call.

Procedure 5-2
Generating a Cell Audit Report

- 1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button, then select Cell Audit Report.

A dialog box appears asking whether you want to select the Default or Custom report.

- 2 Click on Default with the left mouse button to use the Meridian IVR default statistics file or Custom to use a previously saved Meridian IVR statistics file from which the report is generated. (If you no longer want to generate a report, click on Cancel with the left mouse button).

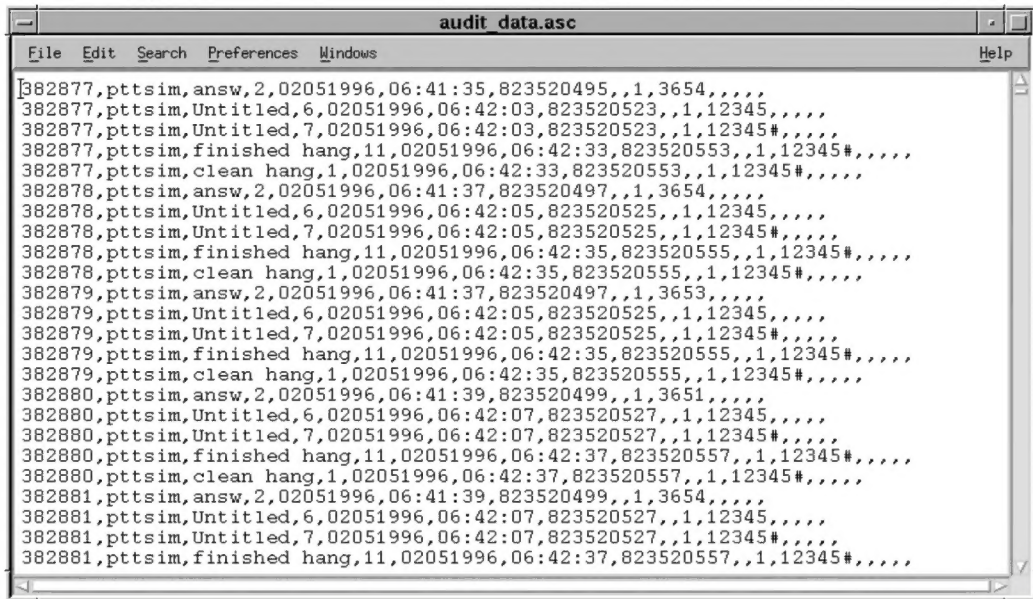
When you select Custom, a file browser appears. It allows you to select a data file to use as a source for the report. Double-click on the directory name with the left mouse button for the list of data files to appear. Select the data file you want by clicking on it with the left mouse button. When the data file appears in the selection box, click on OK.

The system displays a message box telling you that it will take a few minutes.

- 3 Click on OK again with the left mouse button.

The system displays the report as shown in Figure 5-2.

Figure 5-2
Cell Audit Report



```
audit_data.asc
File Edit Search Preferences Windows Help
[382877,pttsim,answ,2,02051996,06:41:35,823520495,,1,3654,,,,,
382877,pttsim,Untitled,6,02051996,06:42:03,823520523,,1,12345,,,,,
382877,pttsim,Untitled,7,02051996,06:42:03,823520523,,1,12345#,,,,,
382877,pttsim,finished hang,11,02051996,06:42:33,823520553,,1,12345#,,,,,
382877,pttsim,clear hang,1,02051996,06:42:33,823520553,,1,12345#,,,,,
382878,pttsim,answ,2,02051996,06:41:37,823520497,,1,3654,,,,,
382878,pttsim,Untitled,6,02051996,06:42:05,823520525,,1,12345,,,,,
382878,pttsim,Untitled,7,02051996,06:42:05,823520525,,1,12345#,,,,,
382878,pttsim,finished hang,11,02051996,06:42:35,823520555,,1,12345#,,,,,
382878,pttsim,clear hang,1,02051996,06:42:35,823520555,,1,12345#,,,,,
382879,pttsim,answ,2,02051996,06:41:37,823520497,,1,3653,,,,,
382879,pttsim,Untitled,6,02051996,06:42:05,823520525,,1,12345,,,,,
382879,pttsim,Untitled,7,02051996,06:42:05,823520525,,1,12345#,,,,,
382879,pttsim,finished hang,11,02051996,06:42:35,823520555,,1,12345#,,,,,
382879,pttsim,clear hang,1,02051996,06:42:35,823520555,,1,12345#,,,,,
382880,pttsim,answ,2,02051996,06:41:39,823520499,,1,3651,,,,,
382880,pttsim,Untitled,6,02051996,06:42:07,823520527,,1,12345,,,,,
382880,pttsim,Untitled,7,02051996,06:42:07,823520527,,1,12345#,,,,,
382880,pttsim,finished hang,11,02051996,06:42:37,823520557,,1,12345#,,,,,
382880,pttsim,clear hang,1,02051996,06:42:37,823520557,,1,12345#,,,,,
382881,pttsim,answ,2,02051996,06:41:39,823520499,,1,3654,,,,,
382881,pttsim,Untitled,6,02051996,06:42:07,823520527,,1,12345,,,,,
382881,pttsim,Untitled,7,02051996,06:42:07,823520527,,1,12345#,,,,,
382881,pttsim,finished hang,11,02051996,06:42:37,823520557,,1,12345#,,,,,
```

Running the Call Detail Report

The Call Detail Report lists the following information on each call processed by Meridian IVR:

- how many calls were received
- the date and time of each call that was processed
- the duration of the call in seconds
- the number of the application that processed the call
- Meridian Mail
- the channel number
- the phone number or extension that was called

The Call Detail Report lists information on each call processed by Meridian IVR during the selected time period. This report can contain information on up to 15 000 calls.

Procedure 5-3 Generating a Call Detail Report

- 1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button then select Call Detail Report.

A dialog box appears asking whether you want to select the Default or Custom report.

- 2 Click on Default with the left mouse button to use the Meridian IVR default statistics file or Custom to use a previously saved Meridian IVR statistics file from which the report is generated. (If you no longer want to generate a report, click on Cancel with the left mouse button).

When you select Custom, a file browser appears. It allows you to select a data file to use as a source for the report. Double-click on the directory name with the left mouse button for the list of data files to appear. Select the data file you want by clicking on it with the left mouse button. When the data file appears in the selection box, click on OK.

The system displays a message box telling you that it will take a few minutes.

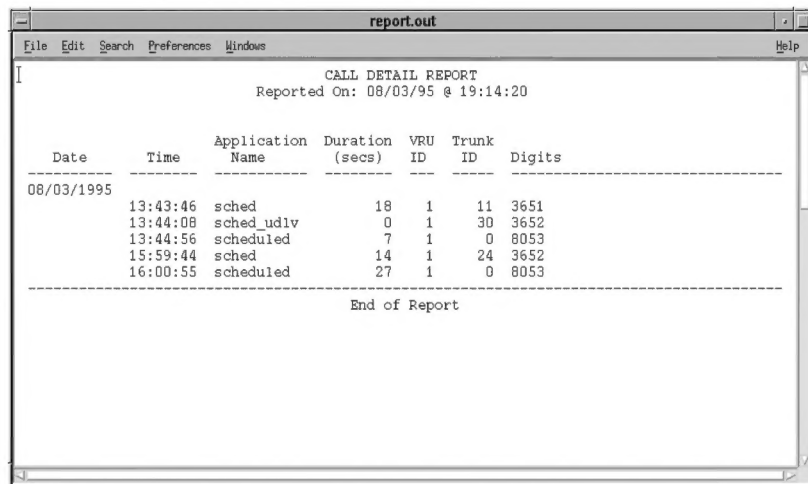
- 3 Click on OK with the left mouse button.

A window frame appears.

- 4 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.

The system displays the report as shown in Figure 5-3.

Figure 5-3
Call Detail Report pop-up window



Date	Time	Application Name	Duration (secs)	VRU ID	Trunk ID	Digits
08/03/1995						
	13:43:46	sched	18	1	11	3651
	13:44:08	sched_udlv	0	1	30	3652
	13:44:56	scheduled	7	1	0	8053
	15:59:44	sched	14	1	24	3652
	16:00:55	scheduled	27	1	0	8053
End of Report						

Note: The Digits field displays the number of the called party and the number of the caller. In Figure 5-4, the first four numbers in the digits buffer show the called party and the caller as internal extensions. If the call is outgoing to an external number, the external number appears, followed by the caller's number.

Figure 5-4
Call Detail Report (full report)

Date	Time	Application Name	Duration (secs)	VEU ID	Trunk ID	Digits
07/12/1995	10:35:38	BE79938	3	1	0	3652
	10:36:03	BE79938	2	1	1	3652
	10:42:25	BE79938	1	1	0	3652
	10:50:17	BE79938	7	1	1	3652
	10:51:39	BE79938	2	1	0	3652
	11:09:24	BE79938	7	1	0	3652
	11:12:55	BE79938	6	1	1	3652
	11:17:14	BE79938	1	1	0	3652
	11:40:21	BH40738b	13	1	3	3652
	11:40:21	BH40738b	1	1	5	3652
	11:40:21	BH40738b	1	1	6	3652
	11:50:16	fax45_50	34	1	1	3652
	13:02:09	fax45_50	34	1	2	3652
	13:13:08	BE80043	3	1	0	3652
	13:14:18	BE80043	2	1	0	3652
	13:15:00	BE80043	6	1	0	3652

Running the Call Audit Report

The Call Audit Report lists statistics for the milestone cells in the application. The timestamp for each milestones is logged at the beginning of the call, and after completion of each milestone cell.

The milestone cells are

- all the cells within the application with their Call Auditing parameter enabled and configured
- all EVENT cells in the application

This report lists statistics on how frequently callers use the various sections of the application, and how much time the callers take in these sections.

The report lists the following information:

- date and hour the call started
- name of the application
- name of each milestone cell
- usage count (the number of times each milestone cell was executed)
- the average time in seconds spent between milestone cells
- the total time in seconds spent between milestone cells

Calls are listed in chronological order.

Procedure 5-4

Generating a Call Audit Report

- 1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button, then select Call Audit Report.

A dialog box appears asking whether you want to select the Default or Custom report.

- 2 Click on Default with the left mouse button to use the Meridian IVR default statistics file or Custom to use a previously saved Meridian IVR statistics file from which the report is generated. (If you no longer want to generate a report, click on Cancel with the left mouse button).

When you select Custom, a file browser appears. It allows you to select a data file to use as a source for the report. Double-click on the directory name with the left mouse button for the list of data files to appear. Select the data file you want by clicking on it with the left mouse button. When the data file appears in the selection box, click on OK.

The system displays a message box telling you that it will take a few minutes.

- 3 Click on OK with the left mouse button.

A window frame appears.

- 4 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.

The system displays the report as shown in Figure 5-5.

Figure 5-5
Call Audit Report

Date	Hour	Application Name	Milestone Cell Name	Usage Count	Average Time (secs)	Total Time (secs)
08/03/1995	13:00	sched				
		Playback event ID		1	.0	0
		Playback message number		1	2.0	2
		Record a message		1	6.0	6
		Set Delivery Interval		1	7.0	7
		Set telephone number		1	.0	0
		msg delivered		1	.0	0
		success		1	2.0	2
		sched_udlv		1	1.0	1
		Answer call.		1	.0	0
		Check scheduled app		1	.0	0
		Error FIVE		1	.0	0
		Error check		1	.0	0

Running the Subscriber Report

The Subscriber Report lists the following information about incoming calls:

- the date and time that each call was made
- the number that was called
- the time (in seconds) that the call lasted

The Subscriber Report can contain information on the last 15 000 calls. This report is updated on the hour; the system may not display data for the current hour.

Procedure 5-5 Generating a Subscriber Report

- 1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button, then select Subscriber Report.

A dialog box appears asking whether you want to select the Default or Custom report.

- 2 Click on Default with the left mouse button to use the Meridian IVR default statistics file or Custom to use a previously saved Meridian IVR statistics file from which the report is generated. (If you no longer want to generate a report, click on Cancel with the left mouse button).

When you select Custom, a file browser appears. It allows you to select a data file to use as a source for the report. Double-click on the directory name with the left mouse button for the list of data files to appear. Select the data file you want by clicking on it with the left mouse button. When the data file appears in the selection box, click on OK.

The system displays a message box telling you that it will take a few minutes.

- 3 Click on OK with the left mouse button.

A window frame appears.

- 4 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.

The system displays the report as shown in Figure 5-6.

Figure 5-6
Subscriber Report

Date	Time	Subscriber	Connect Time (secs)
08/03/1995	13:43:46	3651	18
	13:44:08	3652	0
	13:44:56	8053	7
	15:59:44	3652	14
	16:00:55	8053	27

End of Report

Running the Channel Usage Report

The Channel Usage or Trunk Usage Report details channel activity for each channel so that you can see which channels are handling the most calls. This report lists the number of times and the number of minutes that each channel was in use.

The report is organized by VRU number and channel number. For each channel, the report shows the number of minutes and the number of times that the channel was in use during each hour in a six-hour period.

For each hour, the report also shows the maximum number of channels that were busy simultaneously and the length of time, in minutes, that the maximum number of channels were busy simultaneously. This information is listed beside the Max Usage heading.

The report is displayed in multiples of six-hour periods.

The system generates one record for each channel that was active during the hour. It also generates one additional record containing statistics about the system as a whole each hour. The Channel Usage Report can contain up to 146 250 of the most recent records. This size should be sufficient for average use up to three months.

Procedure 5-6 **Generating the Channel Usage Report**

- 1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button, then select Channel Usage Report.

A dialog box appears asking whether you want to select the Default or Custom report.

- 2 Click on Default with the left mouse button to use the Meridian IVR default statistics file or Custom to use a previously saved Meridian IVR statistics file from which the report is generated. (If you no longer want to generate a report, click on Cancel with the left mouse button).

When you select Custom, a file browser appears. It allows you to select a data file to use as a source for the report. Double-click on the directory name with the left mouse button for the list of data files to appear. Select the data file you want by clicking on it with the left mouse button. When the data file appears in the selection box, click on OK.

The system displays a message box telling you that it will take a few minutes.

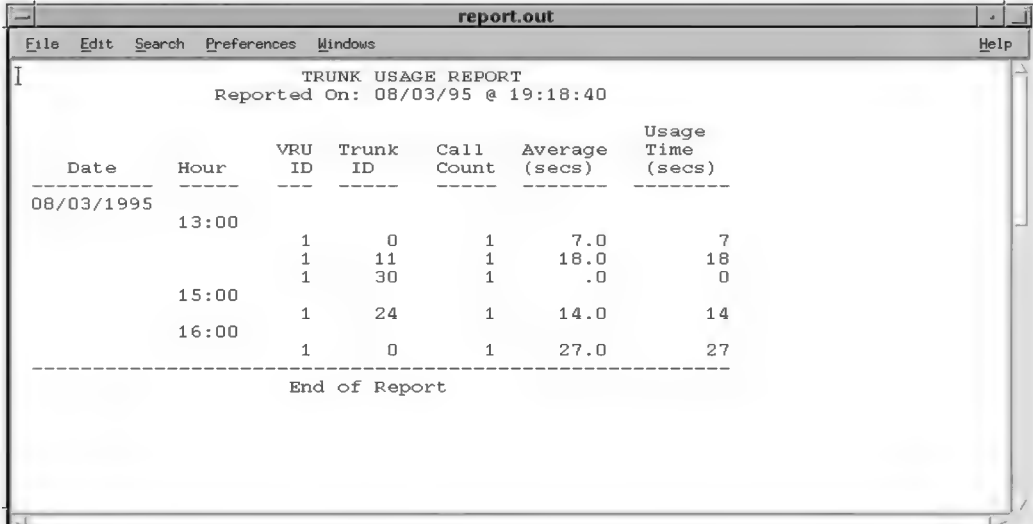
- 3 Click on OK with the left mouse button.

A window frame appears.

- 4 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.

The system displays the report as shown in Figure 5-7.

Figure 5-7
Channel Usage Report



The screenshot shows a window titled "report.out" with a menu bar (File, Edit, Search, Preferences, Windows, Help). The report content is as follows:

Date	Hour	VRU ID	Trunk ID	Call Count	Average (secs)	Usage Time (secs)
08/03/1995	13:00	1	0	1	7.0	7
		1	11	1	18.0	18
		1	30	1	.0	0
	15:00	1	24	1	14.0	14
	16:00	1	0	1	27.0	27

End of Report

Running Log Reports

There are three types of logs available on Meridian IVR for which you can generate a report.

Transaction Log Report

The Transaction Log Report lists system-related activities such as the startup and shutdown of applications, error messages, and resource allocations (see Figure 5-8).

The Transaction Log Report can be used as a tool for diagnosing errors that occur while Meridian IVR is in use. Specific Transaction Log errors can be found in the *Meridian IVR Maintenance and Diagnostics Guide* (NTP 555-9001-500).

Meridian IVR processes generate system events at various times. The Transaction Log Report can record the 300 most recent events.

Each message is stamped with the date and time that it was added to the transaction log. For each message, there is the name of the Meridian IVR module (process) that generated the message, a code number, and a brief description of the event. The most recent information appears at the end of the report.

Transaction Log error messages are listed in the *Meridian IVR Maintenance and Diagnostics Guide* (NTP 555-9001-500).

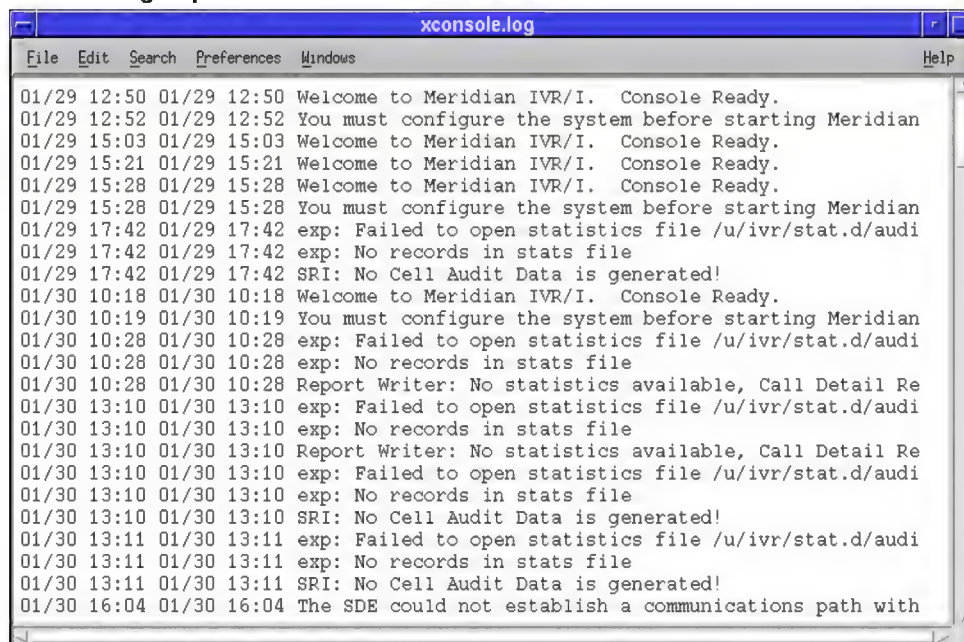
Figure 5-8
Transaction Log Report

Date	Time	Process Name	Severity	Code	Log Message
TRANSACTION LOG REPORT					
Reported On: 08/03/95 @ 19:20:27					
08/03	13:43	CLI	MINOR	72	Application Stopped: sched_udlv
		CLI	ADVISORY	71	Stopping Application: sched_udlv
		CLI	ADVISORY	12	Application Unload : sched_udlv
		CLI	ADVISORY	10	Application Startup : sched_udlv
		CLI	ADVISORY	6	Application Load : sched_udlv
	15:09	UEH	ADVISORY	1600	Process Startup
		VFT	ADVISORY	900	Process Startup
		CSC	ADVISORY	1100	Process Startup
		UST	ADVISORY	700	Process Startup
		CLI	ADVISORY	0	CLI Startup
		VIP1	ADVISORY	100	Process Startup
		PMG	ADVISORY	300	Startup
		SAD	ADVISORY	1300	Startup
		DBS	ADVISORY	800	Process Startup
		VRM	ADVISORY	400	Process Startup

Console Log Report

The Console Log Report, as shown in Figure 5-9, displays all of the messages in the Meridian IVR Console window. Timestamps are included with all of the messages displayed on both the Console window and in the report.

Figure 5-9
Console Log Report



Backup Tool Log Report

The Backup Tool Log Report, as shown in Figure 5-10, lists all of the information in the Backup Tool Log File.

Figure 5-10
Backup Tool Log Report

```

[ Thu Feb 08 16:34:23 EST 1996 ] Start of backup immediately on device /dev/rct0
a ../apps/+test.vpf 18 tape blocks
a ../apps/MultiPage.vpf 39 tape blocks
a ../apps/Record.vpf 41 tape blocks
a ../apps/Simpletst.vpf 16 tape blocks
a ../apps/Simplet~1.vpf 16 tape blocks
a ../apps/Time.vpf 62 tape blocks
a ../apps/Untitled.vpf 16 tape blocks
a ../apps/Untitle~1.vpf 16 tape blocks
a ../apps/Untitle~2.vpf 16 tape blocks
a ../apps/Untitle~3.vpf 16 tape blocks
a ../apps/Untitle~4.vpf 16 tape blocks
a ../apps/Untitle~5.vpf 16 tape blocks
a ../apps/aaa.vpf 11 tape blocks
a ../apps/abc.vpf 10 tape blocks
a ../apps/appa.vpf 34 tape blocks
a ../apps/appanew.vpf 38 tape blocks
a ../apps/appb.vpf 25 tape blocks
a ../apps/bg.vpf 23 tape blocks
a ../apps/callout.vpf 39 tape blocks
a ../apps/callout~1.vpf 33 tape blocks
a ../apps/callout~2.vpf 37 tape blocks
a ../apps/callout~3.vpf 40 tape blocks
a ../apps/cathy.vpf 30 tape blocks
  
```

Procedure 5-7 Generating log reports

- 1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button, then select Log Reports.
A second pull-down menu appears listing the three types of log reports.
- 2 Click on the log report you want to generate with the left mouse button, then click on OK.
The system displays a message box telling you that it will take a few minutes.
- 3 Click on OK with the left mouse button.
A window frame appears.
- 4 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.
The system displays the log report you select.

System Configuration Report

System Configuration Report lists the complete system configuration as entered through the Meridian IVR system configuration interface.

Procedure 5-8

Generating the System Configuration Report

- 1 In the Meridian IVR main menu, click on the System Reports icon with the left mouse button then select System Configuration Report.

The system displays a message box telling you that it will take a few minutes.

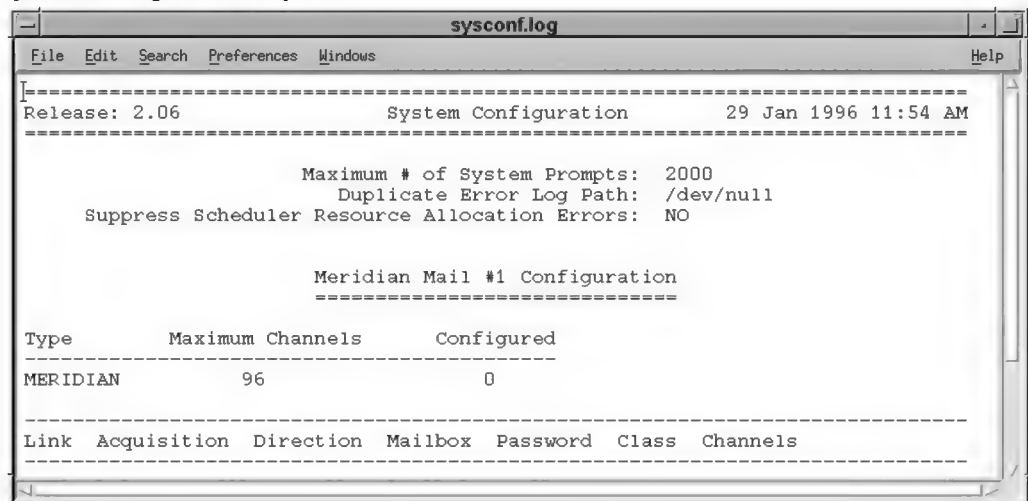
- 2 Click on OK with the left mouse button.

A window frame appears.

- 3 Move the mouse to place the window frame in a suitable location on the desktop, then click on the left mouse button.

The system displays the report. as shown in

Figure 5-11
System Configuration Report



Saving or writing a report to a file

Once you run a report and it appears on your window, you can write it to a file (that is, save it).

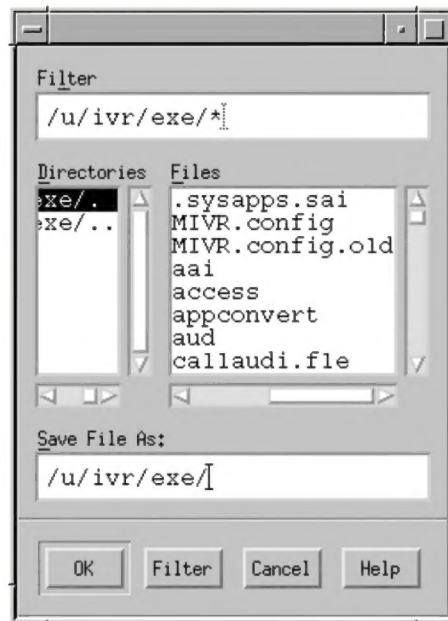
Note: We recommend that you save a copy of the currently displayed report with another filename for future references. The default report file is overwritten each time you request a report.

Procedure 5-9 Writing a report to a file

- 1 With your report displayed on the window, select Save from the File pull-down menu.

The Write to File window appears as shown in Figure 5-12.

Figure 5-12
Write to File window



- 2 Click on the appropriate default file name on the right side of the window with the left mouse button.
- 3 Click on OK with the left mouse button.

Printing reports

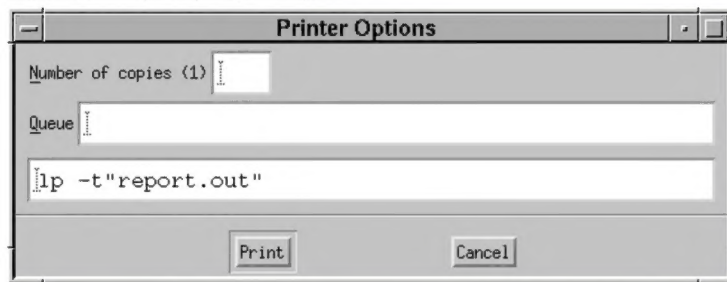
To print reports, you must have a printer already configured on your system.

Procedure 5-10 Printing a report

- 1 With the report displayed on your window, select Print from the File pull-down menu.

The Select Printer Device window appears, showing a list of available printers; generally, it lists only one device.

Figure 5-13
Select Printer Device window



- 2 Select the printer device.
- 3 Click on the Print button.

The system prints your report.

Exiting reports

Procedure 5-11 Exiting a report

- 1 Select Exit from the File pull-down menu.

You return to the Meridian IVR main window.

Report statistics

You can erase the contents of any report (except the Transaction Log Report) and start again by resetting the statistics. The system does not erase data for the current hour. Therefore, you should reset statistics immediately following the start of the hour.

Procedure 5-12 Resetting reports statistics

- 1 Select the Reset Statistics option from the System Reports menu.

The system resets the statistics.

Note: Meridian IVR core (application executing) software must be running in order to reset statistics.

Statistics export tool

The statistics export tool reads the statistics file and exports the data into two ASCII files in the **stat.d** directory: **audit_hdrs.asc** for call header records and **audit_data.asc** for cell data records. The data is stored in these files as comma-separated fields, suitable for importing into databases or programs.

Procedure 5-13 Exporting statistics data

- 1 Click on the Control Panel Reports icon.
- 2 Select the Export menu option.

The Default button accesses the **audit_stat.d** file.

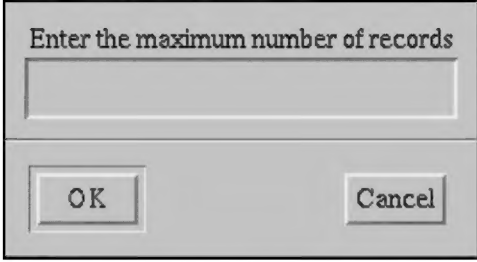
The Custom button allows you to choose the statistics file (from a backup file, for example).

You can use the statsbkup tool to back up the data before exporting it.

Resizing statistics tool

When the **audit_stat.d** file is full, the incoming information wraps around, overwriting earlier data. The Resizing Statistics tool allows you to change the size of the statistics file so you can increase the amount of data saved before the file wraps. Selecting Resize Statistics from the Reports Icon accesses the following window (see Figure 5-10).

Figure 5-14
Resize Statistics window



The image shows a standard Windows-style dialog box. At the top, it says "Enter the maximum number of records". Below this text is a single-line text input field. At the bottom of the dialog, there are two buttons: "OK" on the left and "Cancel" on the right.

You can increase the size of the `audit_stat.d` file to any size you need, up to 2 147 483 648 records. Each record takes 252 bytes and the file header takes 20 bytes. Ensure that you have sufficient disk space for the number of records you want to save.

	CAUTION! Risk of losing data
	Whether you increase or decrease the size of your statistics file, some data will be lost. Be sure you back up your files before resizing to avoid losing data.

Backing up your statistical information

Since files in the `stat.d` directory are limited in size, when a file is full, the incoming information wraps around, overwriting the original data, which is then lost. You can use the `statsbkup` tool to copy statistical information from the files in the `stat.d` directory to another file of your choice to avoid losing this information.

Incorporating `-r` in the command line of the `statsbkup` tool will delete the contents of the `audit_stat.d` file once the backup is complete.

Use the Backup Tool or the UNIX tool, `cron`, to perform backups of the `audit_stat.d` file automatically.